distinct projecting angle just below the shoulder, and with the margins at the apical portion strongly and acutely serrate, distinctly punctured, except near the suture at a short distance from the base, the usual costæ indicated by lines of punctures. The underside of the insect resembles that of *Chrysodema radianum*, but is more golden, and all the median area is more flattened; this is particularly noticeable at the inner part of the posterior coxæ, which forms a more distinct angle with the rest of the coxa. The tarsi are pale rusty yellow. The apical segment of the abdomen has a very small acute notch.

Cyphogastra abdominalis, sp. n.

Viridis, nitida; thoracis disco utrinque cyanco suffuso; elytris sat fortiter punctatis, ad apicem lævioribus, fere nigris, ad latera postice aureo-viridi suffusis, margine ipso cupreo tincto; corpore subtus aureo-viridi, lateribus abdomineque læte cupreis, hoc vittis quatuor sordide albis ornato.
Long. 13–16 lin.

Very like *C. nigripennis*, Th., but rather broader and more strongly punctured, with the apex of the elytra formed as in *C. calepyga*, Th. The elytra nearly black, but have a distinct dark blue shade in some lights, the margins more or less green or golden green. The body beneath is green (with the usual yellow powder here and there), with the sides, and especially the abdomen, reddish coppery.

Two examples show a slight pale bluish-green shade at the suture of the elytra near the apex. Some examples have the metasternum coppery. One specimen has a little green shade on the abdomen.

MISCELLANEOUS.

Doubly-armoured Herrings. By A. Smith Woodward.

In his studies of the herrings of New South Wales, Mr. J. Douglas Ogilby * has lately made an interesting observation, of which he does not appear to appreciate the significance. In describing a new species, *Clupea sprattellides*, from the rivers flowing into Port Jackson and Botany Bay, he remarks that it differs from all the

* Records of the Australian Museum, vol. ii. p. 24 (August 1892).

typical members of the genus in exhibiting "a series of scutes similar to those on the abdominal profile between the occiput and the dorsal" fin. He points out, moreover, that this feature is peculiar to "all the freshwater and estuary non-migratory Herrings of the cismontane rivers of the Colony, between the limits of the Richmond River and Botany Bay;" while he finally observes that the presence of the dorsal scutes may perhaps be regarded as separating the species in question from the genus *Clupea*, in which case he proposes the new name of *Hyperlophus*.

If Mr. Ogilby had not shared in that lamentable ignorance of extinct animals so conspicuous in a certain school of zoologists, he might have been spared the discussion of a point that was settled more than fifteen years ago; and, instead of adding to the burden of synonymy, he might have been able to contribute an item to the broad philosophy of the subject. As a matter of fact, the doubly-armoured herrings were discovered in 1877 by Professor E. D. Cope*, who established for them the genus *Diplomystus*—a genus now so widely recognized that it has already found a place in the elementary handbooks †.

Now the great interest of Mr. Ogilby's observation lies in the circumstance that *Diplomystus* is one of the earliest known types of herring, having a very wide range in space during the latter part of the Cretaceous and the early part of the Tertiary period. It was evidently a characteristic fish of those times, and no trace of the genus at a later period seems to have been recorded until the publication of Mr. Ogilby's recent paper. It has been discovered in the Upper Cretaceous of Brazil and of Syria; in the Eocene of Wyoming, U.S.A.; and in the Oligocene of the Isle of Wight. It is most abundantly represented in the Green River Shales of Wyoming ‡, and some species exhibit the remarkably forward pelvic fins observed in the new herring from New South Wales. The occurrence of *Diplomystus* at the present day in the freshwaters of Australia, is thus another interesting case of the survival of ancient types in remote places of refuge; and it might be profitable to institute a detailed comparison between the other freshwater Teleostean fishes of Australia and their extinct allies occurring in other parts of the world.

The Development of the Gemmules of Ephydatia fluviatilis, *Auct.*

By W. Zykoff, of Moscow.

While at present engaged in preparing for the press a detailed article on the development of *Ephydatia fluviatilis*, Auct., I see a

* Bull. U.S. Geol. Surv. Territ. vol. iii. p. 808.

† Zittel, Handb. Palæont. vol. iii. p. 276; Nicholson & Lydekker, Palæont. vol. ii. p. 996.

‡ E. D. Cope, Rep. U.S. Geol. Surv. Territ vol. iii. pp. 73–79, with plates.